Amendments to the Claims

This listing of claims will replace all prior versions, and listings, of claims in the application:

Listing of Claims:

1. (Currently amended) An in-line four-cylinder engine for a vehicle including a crankshaft having first crank pins of two cylinders, wherein the first crank pins are provided on a common first virtual plane ~~in arrangement~~ and are arranged with a 180° phase difference, and having second crank pins of ~~the other~~ another two cylinders, wherein the second crank pins are provided on a second virtual plane different by a 90° phase from the first virtual plane ~~in arrangement~~ and are arranged with a 180° phase difference, the in-line four-cylinder engine ~~for a vehicle~~ comprising:

a crankshaft satisfying a formula of

$(k_L - 0.25)\cdot(0.25 - k_R) \cong D_R / D_L$,

wherein, when a crank web for each of at least two cylinders is divided between a pair of half crank webs ~~faced with respect to~~ facing a crank pin, wherein k_L, k_R denote balance ratios of the both half crank webs (wherein $k_L \neq 0.25$, $k_R \neq 0.25$) and D_L, D_R denote ~~distance~~ distances from the center in a longitudinal direction of the crankshaft to the respective half crank webs, the ~~crankshaft being arranged that~~ crank webs for the four cylinders ~~be~~ of the engine are set so that a track of a vector of a primary inertial couple ~~would be~~ is formed into a substantially circular shape; and

a primary balancer for generating a couple vector offsetting a vector of the first inertia couple.

2. (Original) The in-line four-cylinder engine for a vehicle according to Claim 1, wherein $(k_L + k_R)$ for at least a part of the cylinders is less than 0.5.

3. (Original) The in-line four-cylinder engine for a vehicle according to Claim 1, wherein $(k_L + k_R)$ for at least a part of the cylinders is more than 0.5.

4. (Original) The in-line four-cylinder engine for a vehicle according to Claim 1, wherein two cylinders satisfy a condition in Claim 1 and both of the balance ratios k_L and k_R of the other two cylinders are set at 0.25.

5. (Currently amended) The in-line four-cylinder engine for a vehicle according to any one of Claims 1 to 3, wherein the crankshaft has crank pins of the first and fourth cylinders~~, the crank pins being~~ located on the first virtual plane, and crank pins of the second and third cylinders~~, the crank pins being~~ located on the second virtual plane, when the first to fourth cylinders are provided in this order from an end.

6. (Currently amended) The in-line four-cylinder engine for a vehicle according to Claim 1, wherein the crankshaft has crank pins of the first and third cylinders~~, the crank pins being~~ located on the first virtual plane, and crank pins of the second and fourth cylinders~~, the crank pins being~~ located on the second virtual plane.

7. (Currently amended) The in-line four-cylinder engine for a vehicle according to Claim 1, wherein the crankshaft has crank pins of the first and second cylinders~~, the crank pins being~~ located on the first virtual plane, and crank pins of the third and fourth cylinders~~, the crank pins being~~ located on the second virtual plane.

8. (Currently amended) The in-line four-cylinder engine for a vehicle according to Claim 5, wherein balance ratios k_L and k_R and ~~distance~~ distances D_L and D_R of half crank webs of the respective cylinders are symmetrical between the first and fourth cylinders and symmetrical between the second and third cylinders.

9. (Currently amended) The in-line four-cylinder engine for a vehicle according to Claim 6 or 7, wherein the ~~distance~~ distances D_L and D_R ~~is~~ are symmetrical between the first and fourth cylinders and between the second and third cylinders while the balance ratios k_L and k_R of half crank webs are symmetrical between two arbitrary combined ~~two~~ cylinders.

10. (Currently amended) The in-line four-cylinder engine in Claim 1, wherein the primary balancer is provided parallel to the crankshaft, and balance weight is provided at a location opposite to the crank pins of the second and third cylinders or at a location opposite to the crank pins of the first and fourth cylinders.

11. (Original) A vehicle provided with the in-line four-cylinder engine for a vehicle according to Claim 1.